

1898.



ANNUAL REPORT

OF THE

Medical Officer of Health

TO THE

BEACONSFIELD

URBAN DISTRICT COUNCIL.



C. E. HANSLOW, PRINTER, HIGH STREET, BEACONSFIELD.

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Medical Officer's Report,

1898.

SUMMARY OF WORK DONE DURING 1898.

(1). DRAINAGE OF THE TOWN.—The usual systematic inspections of the town drainage system were made. In view of the new sewerage scheme proposed by the Council, private owners have not been unduly pressed to lay out money upon extensive improvements. The many defects mentioned in previous Reports still exist. Many cases, however, in which danger to health was caused by filth conditions have been dealt with, and advice and persuasion with hints as to there being force at one's back, have been sufficient to induce the offending parties to at least do what was in their power to remedy the conditions complained of. I received fewer complaints than usual about the nuisances which arise from the street drains and gullies, probably on account of the attention given by the Surveyor and Scavenger, as to keeping the traps clean and properly sealed by water. The Filtering Beds are admitted to be antiquated methods of dealing with sewage, as they are much too small for the volume of material poured on to them, and one at least has been the cause of grave danger. I have again and again pointed out the danger of these beds, especially when close to public roadways; and it is a source of much satisfaction to know that under the new scheme these "hot beds of disease" will disappear.

(2). INSPECTIONS IN CASES OF OUTBREAK OF INFECTIOUS DISEASE.—Five cases of Enteric Fever were notified, in three localities, all in the town. In none of the three outbreaks could the infection be traced to a previous case. In one of the localities three cases were notified in the same household. Here filth conditions, largely due to the neglect of sanitary precautions by the inmates, prevailed, and the house was an undoubted instance of overcrowding. From none of the three houses did any infection spread to other parts of the town. Stringent measures of disinfection of the excreta were insisted on,

and the utmost precautions taken that shallow surface wells in the neighbourhood of the houses were not infected. The usual directions as to boiling all water used for drinking and dietetic purposes were given in the instances where the new water supply was not laid on.

Reference will be made further on in this Report to the outbreak of Measles.

(3). NEW BUILDINGS AND ALTERATIONS.—Wherever building or repairs have been in progress the Medical Officer has made it his duty to visit the spots, and by the courtesy of the responsible parties he has been enabled to supervise all such work, and he is glad to be able to report that the work was carried out as thoroughly as could be done without entire demolition of the existing structures.

(4). BAKEHOUSES.—The usual visits were paid to the Bakehouses. The Medical Officer has again to repeat what he has frequently stated before, that the bread is not baked under nearly sufficiently cleanly conditions. However, no drains nor closets, nor privies were found in direct connection with the Bakehouses; but the walls are not cleansed sufficiently often—it ought to be at least every six months. Loose whitewash and distemper can be seen, and the Bakehouses in some instances are used for domestic purposes. Again, the water used in the majority of the Bakeries is from shallow surface wells, every one of which can be shewn to be impure. The Council should insist that water from the new water supply should be the only water used in all the Bakehouses, despite the stout protestations of the interested parties that the water from their wells is excellent for baking purposes, and is “very good water.” I do not know whether water rich in organic matter makes better-tasted bread, nor whether it helps to eke out poor flour; but I do know the source of the rich organic matter in the water, and the bread which is without this little “extra” thrown in is surely the more wholesome. It is an easily demonstrated fact that the ordinary heat of a baker’s oven does not destroy disease germs in the centre of a loaf.

(5). MILKSHOPS, DAIRIES AND COWSHEDS.—Again I would repeat that even in the small way of the milk-dealers in Beaconsfield, examples ought to be taken from the great Dairy Companies; and Cows, Dairies and Cowsheds ought to be kept infinitely cleaner than at present. The curious blackish deposit, so often found at the bottom of the family milk jug, has

only one name and explanation—that is *cow-dung*—cow-dung from the udders and teats of carelessly kept cows. I believe there is an understanding that a *dirty* udder must be washed before milking. How often is this actually done? Will the hireling be likely to perform this little office? Would it not be a far better rule that *all* udders must *always* be washed before milking? Elsewhere in this Report mention is made of the present agitation on the subject of tuberculosis. We know that tuberculous cows give tuberculous milk, especially when the teats or udders are affected, and we know that tuberculous milk is a cause of tuberculosis in human beings, especially in children. But why are so many cows tuberculous? One very important reason is because cowsheds are not large enough, nor well-ventilated, nor kept sufficiently clean; this, of course does not apply so much to a country place like Beaconsfield where the animals are much in the open air; but even granting this, what about the many days in severe weather when the cows are shut up in the byres and cowsheds? The majority of the cowsheds are much too small for the number of cows kept there, and in such a close atmosphere consumption is bred, and spreads from cow to cow. Therefore it is in the cowkeeper's interest to have well-aired and roomy sheds, or he will have constant losses from respiratory diseases.

(6). THE SLAUGHTERHOUSES.—Regular inspection has been made of these buildings. Several are unsuitable for the slaughtering of animals; and I know that the new water supply has not been laid on to all of them. Undoubtedly a small public abattoir would be the best remedy. Can funds be found for this purpose?

(7). THE GRAVEYARDS AND BURIAL GROUNDS.—Owing to former Reports made to this Council as to the overcrowded state of the Burial Grounds attached to the Parish Church and the Congregational Chapel, the Home Office sent their Inspector, Dr. Hoffmann, to inquire into the matter. Dr. Hoffmann confirmed the statements that other ground must be found for burial purposes within twelve months from a date to be fixed by a Home Office Order. The Inspector agreed that a strip of ground parallel to, and to the north of the approach to the National Schools, might be used as an extension of the Parish Churchyard, and that a few vacant spaces in the Chapel Burial Ground, were available; and the Inspector further stated that the Order would prohibit further interments in the present Church and Chapel Burial Grounds, except in the case of near relatives to those already

buried, and that also the "four foot cover" was imperative. It is estimated that this extension, and the exceptions stated above, will defer the ultimately inevitable Cemetery for a period of six or eight years. The owner of a house close to the proposed extension of the Parish Churchyard objected to the extension, because it necessitated expense in laying on a new water supply: as Dr. Hoffman and the Medical Officer of Health were both strongly of opinion that the present shallow wells of the two adjacent houses could not be used for water supply when the new ground came to be used for burial purposes. It is believed, however, that this little difficulty will eventually be surmounted as both wells proved on analysis to be absolutely unfit for drinking or dietetic purposes, without further pollution from possible burials. The two houses have now the new water supply.

(8). WATER SUPPLIES.—Many shallow surface wells have been examined and their waters analysed by me, and in every case, without hesitation, I could say that they were dangerously polluted. It is satisfactory to be able to state that on the danger being represented to the owners of the houses supplied by these wells, in almost every case the new water supply was laid on, or promises were given that this would be done as soon as practicable.

The water supplied by the Amersham, Beaconsfield and District Water Company has been repeatedly analysed by me, and it gives me much pleasure to be able to report that it maintains its high standard of purity. An analysis dated 27th February, 1899, made by an analyst of a London Association, which devotes itself entirely to such investigations will be found as an Appendix to this Report. This analysis should be compared with that of a Beaconsfield shallow well which will also be found in an Appendix.

The analysis of the Company's water shows an absolute freedom from organic impurity, the nitrates—present in all waters—are not in this case due to pollution, and in this water are in very small amount. The amount of ammonia present is very minute, indicating great purity, and the chlorine is even less than the amount usually present in a chalk water of this character.

For a chalk water again the hardness is of a low degree, and is largely removed by boiling, making thus an excellent water for domestic purposes. The bacteriological analysis also shows great purity; but I think that although only 44 organisms were found in each cubic centimetre of the water, even this number could be reduced by extra precautions in storage.

(9). INSPECTIONS OF DWELLINGS.—Many cottages and houses have been inspected. Although one can see improvements from year to year, still much is still wanted in the way of dealing with damp in the cottages; and in almost every class of dwelling, more light and air, and better ventilation is demanded.

Overcrowding one knows exists in some cottages; but there are difficulties in the way of providing more room for the inmates, as the number of cottages is limited.

GENERAL SANITARY CONDITION OF THE DISTRICT.

Many small improvements have been made during the past year; but in the way of large public works I have nothing to report. The new sewage scheme is still under the consideration of the Council; and although I would urge you, gentlemen, to use your utmost despatch in coming to a decision, still, on the other hand, a hasty and ill-considered scheme would instead of being a boon to the people, be a legacy to future generations, with a very heavy death duty to be paid. As I have frequently stated in reports, the present state of many open channels and so-called "traps" in the rear of houses is a source of disease and death; and the ditches, channels, catchpits, and even the filter-beds, which surround the town are relics of the methods of sewage disposal of a past age, and are intolerable in the closing years of the enlightened nineteenth century. Moreover, the tax in illness and death, which these insanitary conditions claim as their due, falls not on the strong—although even these occasionally have the burden to bear—but on the weak; on the helpless infant and growing child, least fitted of all to resist the fell power of the grim collector. Therefore, gentlemen, I beg of you to use all your powers to bring the new sewage scheme to a successful issue; that you may, through your endeavours, and progressive ideas, see a race of men and women, sturdy in mind and limb, worthy of their ancestors of Bucks, growing up in Beaconsfield; in whose ranks, during infancy, preventable and fatal disease has made no gaps. It is a well-known fact that many diseases such as diarrhoea, so-called "consumption of the bowels," and bronchitis, are largely *preventable*, and these are the chief causes of the huge infant mortality in most countries; and that general sanitation, overcrowding in cottages, want of light and air, damp, and partly also maternal neglect and ignorance, are the causes of these diseases. Sanitary Authorities therefore should "put in force the manifold powers they now possess" in remedying these defects.

The public mind at the present time is much agitated on the question of Tuberculosis in man, and in animals as affecting the food of man; and it is a wholesome thing that it is so. Although in this district, during the past year, no death has been recorded as directly due to Tuberculosis, including Phthisis, "Consumption," Tubercular Meningitis, and Tubercular inflammation of the bowels, still the conditions remain practically unaltered which produced the long death-roll from Phthisis in 1897. The more important of these conditions are, want of air and light in dwellings, overcrowding, and damp sites. Tuberculosis, being a contagious or infectious disease, Medical Officers of Health would welcome the support of their Sanitary Authorities in their desire to see proper cleansing and disinfection carried out in all places where deaths have occurred from this disease, and in rooms whence cases have been removed elsewhere. The tubercle bacillus has considerable powers of vitality, and will await its victim, in dust, in carpets and bedding, and in other hiding places in our homes, quite unsuspected by the worthy, but (may I be forgiven) ignorant housewife. Therefore, an attempt should be made to destroy the intruder, by disinfection and cleansing, and afterwards by continuous and ample supplies of fresh air and light.

With reference to other Infectious Diseases, the occurrence of five cases of Enteric (Typhoid) Fever, has been already mentioned and commented on. There was only one case of Scarlet Fever during the year, and the Medical Officer congratulates the Council on their foresight in keeping the Isolation Cottage always ready for reception of cases, and he attributes the fact that no infection spread from this case, to the rapidity and ease with which isolation was possible and was carried out.

Measles, however, appeared in the autumn, in epidemic form. About 300 cases probably occurred; but owing to there being no form of Notification of this disease in force, exact numbers are not obtainable. For the same reason the Medical Officer was not aware of the existence of the first case until too late to prevent an epidemic. The first case was an imported one; it did not come to his knowledge until the rash had existed for eleven days, and by this time the children next door had caught the disease, and were attending school until the rash appeared, thus spreading the disease through almost the whole of the Infant School. In consequence, the whole school was closed for four days for cleansing and disinfection; and later the Infant School was closed for fourteen days. Had some form of Notification been in force the Medical Officer would have gained early

knowledge of this case, and would have insisted upon its isolation; and in this way the epidemic would probably have been avoided. Would the Council order that in Measles, Whooping Cough, Rötheln (German Measles) and perhaps in Mumps, and Chicken-pox, the *first cases* in a family should be notifiable, and a fee paid for the notification.² In such a system I admit difficulties might arise with the Local Government Board as the law now stands, but such an action on the part of the Council might aid in producing some alteration of the law, and would be an exceedingly expedient and beneficial measure. It would save much paralysis of school work; time and the benefits of education would not be lost to the scholars; it would probably prevent outbreaks of other more serious diseases; for parental diagnosis of "rashes" is not of a very high order, and to say what is Measles, or German Measles, or Scarlet Fever, is not always very easy. And lastly, but by no means least, fewer cases of the less dangerous infectious diseases would occur, thus saving life and health; for in this last epidemic of measles, two children died from its effects, and many are left with chronic troubles and permanently weak constitutions.

The popular idea that Measles and such diseases are a necessary part of a child's existence is entirely false; the truth being that the longer a child escapes measles the less likely is it to have the disease, and the better able is it to resist it successfully if it should be attacked.

As regards STREET WATERING no action has as yet been taken. "Dust" is a well-known source of disease, and Street dust is not by any means simply "grit" and inorganic matter, but is largely composed of dried manure; it is loaded with bacilli: and as already stated, food exposed for sale forms a comfortable shelter, and an excellent breeding ground for dust-borne bacteria. A "pinch" (not a "peek") of March dust simply swarms with the *bacillus coli communis*, which is the cause of several serious diseases, and besides this, the mere nuisance caused by the clouds of dust from which Beaconsfield suffers is very great.

As regards the new sewage scheme I have little to add to what I have already said. Something however, ought to be said about the question of an *irrigation* system as opposed to the *Septic Tank* system.

(1.) Irrigation is an excellent system if sufficient suitable land is available; a water-logged, clayey soil is totally useless, however, for irrigation. In the case of Beaconsfield the proposed land seems to be suitable for irrigation and available.

(2). Irrigation requires constant attention in directing the flow into new channels so as to "rest" the soil and allow time for the soil-bacteria to deal with the sewage.

(3). Irrigation, if the land is available, is very much cheaper as regards the initial outlay.

As regards the Septic Tank Plan —

(1). The "septic tank" system requires very much less land.

(2). It requires much less attention.

(3). A very pure effluent is obtained.

(4). But the initial expense is very much greater in building suitable tanks.

It is estimated that Dibdin's "septic tank" system for towns like Manchester or Leeds would cost about £8,000 per acre of "tanks"; each tank to be properly built, and to contain from 3 to 6 feet of porous material.

It is advisable, therefore, that before committing itself to either system, the Council should be certain that ~~their~~ money is spent on the best and most workable of the two. There is little to choose between the two systems in the matter of effluvia; both are obnoxious, and the operations must be carried out well away from dwellings and roadways.

As regards the scavenger's operations, an improvement has been effected in having the pail closets more frequently emptied. But the pails are still very foul when returned to their places. My suggestion some time ago was that a hose pipe might be available for the scavenger to thoroughly wash out the pails before returning them. A scavenger's yard for this purpose ought to be possible, and there the pails could be deodorised. This would form a most useful and sanitary adjunct to the Council's possessions.

The question of a Mortuary, where post-mortem examinations might take place, and to which the remains of those dying in crowded cottages might be conveyed while awaiting interment, has not yet been taken up. Will any public-spirited individual give us one?

BIRTH AND DEATH RATES.

There were forty-seven births during 1898, 25 being males and 22 females. This means a birth-rate of 28·31 per 1,000 living. This birth-rate is considerably higher than in 1897, and approaches more nearly, just a little below, that of the whole country. The figures are too small for basing calculations upon, especially as there must be some uncertainty as to the exact population, it being, at the middle of 1898, over seven years since a census was taken; and the last census population was unduly large owing to accidental circumstances.

There were 30 deaths during 1898, 14 being of males, and 16 of females. This works out to a death-rate of 18·07 per 1,000 living. This is higher than last year; but here again the figures being so small, one or two more deaths in the year makes a great difference in the annual death-rate. In spite of this it is evident that the death-rate is much too high for a small country place. As many deaths were those of old people it is probable that those who are past work return to their native town, and thus unduly swell the mortality.

The number of deaths of genuine residents here which have occurred elsewhere, probably almost balances the number of deaths of non-residents which have taken place in Beaconsfield.

An analysis of the ages at death shows that seven were deaths of infants under one year old, but of these, three were deaths of premature children. Hence there were four genuine deaths under one year. This is not unduly high, and is an improvement on some former years.

Under five years old there was one death.

Nine deaths were of persons aged over 65, and of these, five were over 70 years of age. Too much stress must not be laid on such a large proportion of the deaths being those of aged persons, as this does not necessarily show that people live to great ages in Beaconsfield: it is more probably accounted for by the fact that the proportion of adults at ages from 18 to 45 is much less here than elsewhere, for individuals at these ages are attracted to the larger towns for the sake of the more remunerative employment obtained there.

There was no death attributed to phthisis.

The Zymotic Diseases accounted for three deaths, one being attributed to enteric fever, and two to measles.

Four deaths were due to cancer. This is very high compared with the death-rate from cancer for the whole country; but here again the total figures are too small to base generalisations upon them.

Gentlemen of the Urban Council of Beaconsfield, permit me to conclude my Report by thanking you for the support you have given me in my endeavours to raise the sanitary standard of this town during the past four years. May this year see a new drainage system inaugurated, and I trust that your deliberations may be completely successful in obtaining a perfect sanitary system, suited to the needs of the place, and so make Beaconsfield a town of which its natives will always speak with pride.

I have the honour to be,

Your obedient Servant,

WILLIAM WILLOUGHBY KENNEDY.

BEACONSFIELD,

February, 1899.

APPENDIX I.

The Clinical Research Association, Limited.

1, SOUTHWARK STREET,

LONDON BRIDGE, S.E.

February 27th, 1899.

Laboratory Report.

TO DR. WILLOUGHBY KENNEDY.

The Specimen of Water from the Amersham, Beaconsfield and District Waterworks Company's Supply, received here on 24/2/99, has been duly examined, and I have been instructed to forward the following Report thereon:

						GRAINS PER GALLON.
Total Solid Residue (dried at 120° C.)	...	...	...	...	...	21.14
Combined Chlorine	...	...	...	...	...	0.8
Expressed as Common Salt	...	...	...	...	...	1.8
Nitrogen as Nitrates	...	...	...	...	...	0.09
Nitrites	...	...	...	...	...	nil.
Saline Ammonia	...	...	...	...	...	traces only.
Albuminoid Ammonia	...	...	...	...	...	traces only.
Oxygen required to oxidise the Organic Matter	...	...	...	...	...	nil.
Hardness (in degrees)	...	...	...	...	..	9.5
Lead or Copper	...	...	...	...	...	nil.

OBSERVATIONS.—From the Chemical point of view this is a Water of excellent quality, and eminently fitted for drinking purposes.

C. H. WELLS,

Secretary of the Association.

The Clinical Research Association Company, Limited.

1, SOUTHWARK STREET,

LONDON BRIDGE, S.E.

February 28th, 1899.

Bacteriological Analysis. Laboratory Report.

TO DR. WILLOUGHBY KENNEDY.

The specimen of Water from the Amersham, Beaconsfield and District Waterworks Company's Supply, received here on 24/2/99, has been duly examined, and I have been instructed to forward the following Report thereon:

This sample of Water contains 44 organisms per cubic centimetre, and bears out the chemical analysis as to the purity of the water.

C. H. WELLS,

Secretary of the Association.

APPENDIX II.

[COPY.]

**Examination of a Sample of Drinking Water taken from a private well
in Windsor End, Beaconsfield.***July 24th, 1898.*

SOURCE AND POSSIBILITY OF CONTAMINATION.—Water taken from pump with leaden pipe to a shallow well in gravel soil: well covered over but not stated to be domed in: well thought to be about 14 feet deep: cesspool about 21 feet distant.

CHEMICAL AND PHYSICAL EXAMINATION.

1. Colour in 9-in. column—Slightly yellow.
2. Turbidity—Becomes dirty grey on boiling.
3. Odour—Very objectionable on boiling: suspicious odour when cold.
4. Residue on evaporation considerable: residue blackens slightly on strong heating, smell unpleasant.
5. Chlorine—About 9 grains per gallon.
Chlorine as Common Salt—About 13 grains per gallon.
6. Nitrites—Abundant evidence of presence of nitrites, more than I have ever found in a so-called good drinking water.
7. Nitrates—Between 3 and 4 grains per gallon.
8. Hardness—About 30 degrees.
9. Lead—None.
10. Zinc, Iron, and Copper—Not tested for.
11. Oxygen absorbed—Not tested for.

From the above examination I am strongly of opinion that the above water is most dangerously polluted with organic matter of animal, probably human origin. A trace of *nitrites* condemns a water: and nitrites are here abundant. The water is totally unfit for drinking or dietetic purposes.

(Signed)

WILLIAM WILLOUGHBY KENNEDY.